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SOURCE Spravochnik Metallurga po Tsvetnym Metallam, (Manual for the Metallurgist
on Nonferrous Metals), Vol II, Literaturny po chernoyi tsvetnoy metallurgii,
Gosizdat, Moscow, 1947.

COPPER SMELTING IN THE USSR

Table 1. Composition of Raw Copper Smelted in Various Plants (%)

Plant	Cu	Fe	Zn	S	SiO ₂	Al ₂ O ₃	CaO + MgO
Krasnoural'sk	15.62	49.66	2.86	28.26	1.18	0.44	--
Kirovograd	19.57	45.20	3.45	25.14	1.22	0.61	--
Karabash	24.34	44.35	1.55	22.19	1.48	1.76	0.63
Allaverdi	25.08	41.64	5.73	22.31	1.26	2.10	1.58
Allaverdi	30.00	38.02	2.56	23.85	1.24	2.99	1.71
Allaverdi	35.06	30.09	2.14	25.47	1.56	2.72	2.50
Karsakpaysk	59.03	14.52	--	22.87	0.36	2.0	1.20

Table 2. Slag Composition in Water-Jacket Ovens of Copper-Smelting Plants (%)

Plant	Type of Smelting	SiO ₂	Fe	FeO	CaO	Al ₂ O ₃	Cu	S	Zn
Karabash	Pyritic	32-33	BaO 2.5-3.0	47-49	3.8-4.5	6.7	0.3-0.35	1.5-1.8	2.2-2.6
Karabash	Semi- pyritic	35-36	BaO 2.5-3.0	40-44	5-7	6-7	0.24-0.27	1.5-1.8	2.5-3.7
Kirovo- grad	Pyritic	30-32	--	40-45	5.8	4.5	0.35-0.4	--	--

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Table 3. Composition of Tails Obtained in Processing at Various Plants

Plant	Cu	Ag	Au	Pb	Bi	Sb	As	Se	Te	Fe	SiO ₂	CaO	Mn
Alavert	26.20	54.67	--	--	--	--	--	2.86	--	0.34	9.10	--	--
Zangezur	9.92	51.88	--	--	--	--	--	--	--	0.29	4.80	--	--
Kirovograd	22.33	49.70	4.17	11.10	1.53	3.61	0.61	13.59	2.10	0.42	8.40	--	--
Karabash	26.97	37.49	3.43	8.41	--	--	--	14.18	0.98	0.50	4.00	--	--
Karabash and Kirovograd	19.3	50.10	2.50	7.20	0.1	0.2	0.1	4.8	0.30	0.30	8.30	0.5	0.9

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